



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,475	10/24/2005	Nir Padan	0002311USU/2279	3345
27623	7590	12/11/2008		
OHLANDT, GREELEY, RUGGIERO & PERLE, LLP			EXAMINER	
ONE LANDMARK SQUARE, 10TH FLOOR			TRAN, DALENA	
STAMFORD, CT 06901				
			ART UNIT	PAPER NUMBER
				3664
			MAIL DATE	DELIVERY MODE
			12/11/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/537,475	<b>Applicant(s)</b> PADAN, NIR
	<b>Examiner</b> Dalena Tran	<b>Art Unit</b> 3664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 29 August 2008.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-14, 16, 18-22 and 27-36 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-14, 16, 18-22, 27-36 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/06)  
Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_



UNITED STATES DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10537475	10/24/05	PADAN, NIR	0002311USU/2279

EXAMINER

Dalena Tran

ART UNIT	PAPER
----------	-------

3664 20081206

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

## **DETAILED ACTION**

### **Notice to Applicant(s)**

1. This office action is responsive to the amendment filed on 8/29/08. As per request, claims 1, 4, 10 have been amended; claims 15, 17, and 23-26 have been cancelled; claims 33-36 have been added. Thus, claims 1-14, 16, 18-22, and 27-36 are pending.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 5-10, 12, 18, 20-22, 27-31, and 35-36, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, recites the limitation "the performance" in line 1, and "the elements of" in line 4. There are insufficient antecedent basis for these limitations in the claim. Also, in claim 1, lines 7-8, "generating dynamically at least one indication and communicating the at least one indication", it is unclear as to what indication generating and communicating.

As per claim 2, recites the limitation "the aircraft flight envelope, the aircraft maneuver-energy graphs, models and limitation, and the aircraft weapon system characteristics". There are insufficient antecedent basis for these limitations in the claim. Also, it is unclear, what "limitation" is talking about in the claim.

As per claims 5-6, recites the limitation "the physical variables", and "the participant elements" in lines 2-3. There are insufficient antecedent basis for these limitations in the claim. Also, it is unclear as to what is "physical variables" and what is "participant elements".

As per claim 7, recites the limitation "the transmission" in line 3. There is insufficient antecedent basis for this limitation in the claim.

As per claim 8, the following need to be clarified or rewrite or amend:

In line 4, recites the limitation "the requested records". There is insufficient antecedent basis for this limitation in the claim; also, it is unclear, what is the requested.

In line 6, recites the limitation "the operational parameters". There is insufficient antecedent basis for this limitation in the claim; also, it is unclear, what is the operational parameters prefers to in the claim.

In line 7, it is unclear, what is "information-marshalling module".

In line 8, recites the limitation "the at least one current situation". There is insufficient antecedent basis for this limitation in the claim; also, it is unclear, what is current situation.

In line 10, it is unclear as to what is "response" and who is "response".

In line 11, recites the limitation "the at least one potential situation". There is insufficient antecedent basis for this limitation in the claim; also, it is unclear, what is "potential" situation.

As per claim 9, the following need to be clarified:

In line 5, it is unclear, what is "post-combat debriefing module"

In lines 6-7, recites the limitation "the at least one selected response", it is unclear, what response being selected; and "t least one guidance instruction", it is unclear what instruction is guiding, and "t" should be corrected as "at".

In line 12, it is unclear, what is “air combat formulas”.

As per claim 10, the following need to be clarified:

Lines 3-4, recites the limitation "the at least one data communication network".

There is insufficient antecedent basis for this limitation in the claim; also, it is unclear, what is that “network”.

Line 5, recites the limitation "the required sequence of software instruction".

There is insufficient antecedent basis for this limitation in the claim.

Line 9, recites the limitation "the diverse devices". There is insufficient antecedent basis for this limitation in the claim. It is unclear as to what are these diverse devices.

As per claim 12, lines 5-6, it is unclear, what are “outgoing information” and “incoming information”. Also, line 7, recites the limitation "the peripheral devices". There is insufficient antecedent basis for this limitation in the claim, and what are these devices.

As per claim 18, “the operating crew is a remotely located operator”. It is not make sense, how can the crew operating a “close-in air combat” if he/she is remotely located, “remote” that mean “outside or away” from the aircraft. The crew should be onboard for “close-in air combat”.

As per claim 20, recites the limitation "the elements of a visual display device". There is insufficient antecedent basis for this limitation in the claim.

As per claim 21, recites the limitation "the elements of an audio output device". There is insufficient antecedent basis for this limitation in the claim.

As per claim 22, recites the limitation "the elements of manual input device". There is insufficient antecedent basis for this limitation in the claim.

As per claim 27, the following need to be clarified or corrected:

Line 1, and lines 6-7, recites the limitation "the performance", and "the analysis of the air combat situation". There are insufficient antecedent basis for these limitations in the claim.

Lines 8-9, it is unclear, what value or parameter represent "aircraft characteristic information" and "weapon system characteristic information".

Line 12, recites the limitation "the previously analyzed situations". There is insufficient antecedent basis for this limitation in the claim, and it is unclear, what situations is the previously situation.

Line 15, it is unclear what is "optimal state" and what is "optimal air combat situation".

Line 17, it is unclear, "recommendation' what. Also, the limitation "the at least one optimal future potential air combat". There is insufficient antecedent basis for this limitation in the claim, and it is unclear, what is "optimal future".

As per claim 28, recites the limitation "the application of the associated commands" in line 4. There is insufficient antecedent basis for this limitation in the claim.

As per claim 29, recites the limitation "the suitable controls". There is insufficient antecedent basis for this limitation in the claim

As per claim 30, the following need to be clarified or corrected:

Line 4, recites the limitation "the analysis". There is insufficient antecedent basis for this limitation in the claim.

Lines 6-7, it is unclear, what value or parameter represent "aircraft characteristic information" and "weapon system characteristic information".

Line 11, recites the limitation "the previously analyzed situations". There is insufficient antecedent basis for this limitation in the claim, and it is unclear, what situations is the previously situation.

Line 12, recites the limitation "the at least one mapped air combat". There is insufficient antecedent basis for this limitation in the claim.

Lines 14-15, it is unclear what is "optimal state" and what is "optimal air combat situation".

As per claim 31, recites the limitation "the associated commands" in line 4. There is insufficient antecedent basis for this limitation in the claim.

As per claim 35, recites the limitation "the flight path" in line 2. There is insufficient antecedent basis for this limitation in the claim.

As per claim 36, it is unclear, what is "ammunition data".

Clarifications or corrections or explanations are required for all of the above.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 10-11, 13-14, 16, 18-22, and 33-36 rejected under 35 U.S.C.103(a) as being unpatentable over Ben-Yair et al. (5587904) in view of Cronkhite et al. (5308022).

As per claim 1, Ben-Yair et al. disclose a system for optimizing the performance of an operating crew of at least one aerial vehicle during at least one close-in air the system comprising the elements of: an assessment information database implemented on at least one computer (see column 2, lines 22-41; and columns 3-4, lines 58-34). Ben-Yair et al. do not disclose generating dynamically at least one indication and communicating the at least one indication as guidance to the operating crew. However, Cronkhite et al. disclose an assessment and guidance software application implemented on the at least one computer for providing in real-time automatic situation assessment, generating dynamically at least one indication and communicating the at least one indication as guidance to the operating crew of the at least one aerial vehicle, wherein said assessment relates to a situation of a dog fight air combat between two aircraft vehicles (see columns 5-6, lines 1-5; and column 7, lines 20-68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Ben Yair et al. by combining generating dynamically at least one indication and communicating the at least one indication as guidance to the operating crew, for monitoring and guiding aircraft movement.

As per claim 2, Ben-Yair et al. disclose the assessment information database comprises the elements of: an aircraft characteristics file comprising the aircraft flight envelope, the aircraft maneuver-energy graphs, models and limitations, and the aircraft weapon system characteristics (see column 2, lines 51-67).

As per claim 3, Ben-Yair et al. disclose the elements of at least one computer installed on the at least one aerial vehicle or on at least one ground station to receive, store, process and forward data specific for the optimization of the conduct of the at least one aerial engagement (see column 2, lines 51-67; and columns 3-4, lines 58-34).

As per claim 4, Ben Yair et al. disclose at least one off-board computer installed in at least one ground station to provide additional data specific for the optimization of the conduct of the at least one close-in air combat (see columns 1-2, lines 50-20).

As per claim 5, Ben Yair et al. disclose at least one sensor device installed on the at least one aerial vehicle to dynamically monitor the physical variables associated with the participant elements of the at least one close-in air combat (see columns 6-7, lines 60-24).

As per claims 6-7, Ben Yair et al. disclose at least one sensor device installed in the at least one ground station to monitor physical variables associated with the participant elements of the at least one close-in air combat, and at least one data communication network linking the at least one aerial vehicle and the at least one ground station to allow for the transmission or reception of the information associated with the at least one close-in air combat (see columns 5-6, lines 50-48).

As per claim 10, Ben Yair et al. disclose a communication device to link the at least one computer to remote information sources via the at least one data communication network (see columns 5-6, lines 50-48); a processor device to execute the required sequence of software instructions embedded in the assessment and guidance application, and a data bus device to provide at least one data delivery channel among the diverse devices installed in the at least one

on-board device (see column 7, lines 25-51); and a digital signal processor device to process digitally formatted information from the at least one sensor device and from the at least one data communication network (see columns 7-8, lines 52-27).

As per claim 11, Ben Yair et al. disclose a sound synthesizing device to generate audio instructions to be communicated to the operating crew of the at least one aerial vehicle (see column 8, lines 28-51).

As per claim 13, Ben Yair et al. disclose the sensor device is an instrument providing an indication as to the parameters of flight (see columns 11-12, lines 56-21).

As per claim 14, Ben Yair et al. disclose the sensor device is a global positioning system device (see columns 6-7, lines 60-24).

As per claim 16, Ben Yair et al. disclose the at least one aerial vehicle is an unmanned combat aerial vehicle (see the abstract).

As per claim 18, Ben Yair et al. disclose the operating crew is a remotely located operator (see column 11, lines 23-52).

As per claim 19, Ben Yair et al. disclose the computer is an onboard computer located within the aerial vehicle (see column 8, lines 13-27).

As per claim 20, Ben Yair et al. do not disclose visual display. However, Cronkhite et al. disclose the element of a visual display device to communicate the at least one instruction to the operating crew in a visual manner (see column 4, lines 58-68; and column 7, lines 20-68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

modify the teach of Ben Yair et al. by combining visual display for providing view point of the aircraft situation in the cockpit display.

As per claims 21-22, Ben Yair et al. disclose the element of an audio output device to communicate the at least one instruction to the operating crew in an aerial manner, and the element of a manual input device to communicate control information from the operating crew to the system (see column 8, lines 13-51).

As per claim 33, Ben Yair et al. disclose an identifying element for identifying the aircraft (see column 2, lines 22-40).

As per claim 34, Ben Yair et al. do not disclose speed and direction guidance. However, Cronkhite et al. disclose the assessment and guidance software application provides accurate speed and direction guidance (see columns 5-6, lines 1-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Ben Yair et al. by combining speed and direction guidance for guiding aircraft movement and chasing another aircraft.

As per claim 35, Cronkhite et al. also disclose provides guidance according to the flight path of an adversary aircraft (see column 4, lines 58-68).

As per claim 36, Ben Yair et al. disclose at least a portion of the situation assessment is a function of ammunition data (see column 2, lines 21-41).

#### **Remarks**

5. Applicant's argument filed on 8/29/08 has been fully considered. Upon updated search, the new ground of rejection has been set forth as above.

Cronkhite et al. is a new reference. Claims 8-9, 12, 15, and 27-32 rejected under 35 U.S.C. 112, second paragraph as above.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-W (in a first week of a bi-week), and T-R (in a second week of bi-week) from 7:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi H. Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dalena Tran/  
Primary Examiner, Art Unit 3664  
December 6, 2008